

What is Claimed is:

1. A display driver which drives a display panel comprising:  
voltage generating means which generate a given voltage;  
5 a voltage-follower-type operational amplifier circuit  
which generates a driving voltage based on the given voltage;  
and

switching means for causing the voltage-follower-type  
operational amplifier circuit to generate the driving voltage  
10 based on the given voltage in a first mode and causing the  
voltage-follower-type operational amplifier circuit to  
generate the driving voltage based on an external voltage supply  
in a second mode.

15 2. The display driver according to claim 1,  
wherein the display driver is mounted on a glass substrate  
on which a display panel is formed, and  
wherein the external voltage supply in the second mode  
is supplied through a transparent conductive film formed on the  
20 glass substrate.

3. The display driver according to claim 1,  
wherein, when the display panel is driven by a plurality  
of the display drivers, the first mode is a mode which generates  
25 a reference voltage for the driving voltage which is generated  
by another display driver, and  
wherein, when the display panel is driven by a plurality

of the display drivers, the second mode is a mode which generates the driving voltage based on the reference voltage generated by the display driver set in the first mode.

5 4. The display driver according to claim 2,

wherein, when the display panel is driven by a plurality of the display drivers, the first mode is a mode which generates a reference voltage for the driving voltage which is generated by another display driver, and

10 wherein, when the display panel is driven by a plurality of the display drivers, the second mode is a mode which generates the driving voltage based on the reference voltage generated by the display driver set in the first mode.

15 5. The display driver according to claim 1,

wherein the voltage generating means generates the given voltage by dividing a potential difference between a given power source voltage at a high potential side and a given power source voltage at a low potential side by a resistor.

20

6. The display driver according to claim 2,

wherein the voltage generating means generates the given voltage by dividing a potential difference between a given power source voltage at a high potential side and a given power source voltage at a low potential side by a resistor.

25

7. The display driver according to claim 3,

wherein the voltage generating means generates the given voltage by dividing a potential difference between a given power source voltage at a high potential side and a given power source voltage at a low potential side by a resistor.

5

8. The display driver according to claim 4,

wherein the voltage generating means generates the given voltage by dividing a potential difference between a given power source voltage at a high potential side and a given power source voltage at a low potential side by a resistor.

10

9. The display driver according to claim 1, wherein the display panel is a simple matrix panel.

15 10. A display device comprising:

a first display driver set in a first mode, which is one of the display drivers according to claim 1;

a second display driver set in a second mode, which is the display driver according to claim 1, to which the driving voltage generated by the first display driver is supplied as the external voltage supply; and

20 a display panel which is driven based on the voltage generated at least by the second display driver,

wherein the first and second display drivers are mounted on a glass substrate on which the display panel is formed, and

25 wherein the driving voltage generated by the first display driver is supplied to the second display driver through

0354137-002801  
103260-244580

a transparent conductive film which is formed on the glass substrate.

11. A display device comprising:

5 a first display driver set in a first mode, which is one of the display drivers according to claim 2;

a second display driver set in a second mode, which is the display driver according to claim 2, to which the driving voltage generated by the first display driver is supplied as  
10 the external voltage supply; and

a display panel which is driven based on the voltage generated at least by the second display driver,

wherein the first and second display drivers are mounted on a glass substrate on which the display panel is formed, and

15 wherein the driving voltage generated by the first display driver is supplied to the second display driver through a transparent conductive film which is formed on the glass substrate.

20 12. A display device comprising:

a first display driver set in a first mode, which is one of the display drivers according to claim 3;

a second display driver set in a second mode, which is the display driver according to claim 3, to which the driving  
25 voltage generated by the first display driver is supplied as the external voltage supply; and

a display panel which is driven based on the voltage

generated at least by the second display driver,

wherein the first and second display drivers are mounted on a glass substrate on which the display panel is formed, and

wherein the driving voltage generated by the first display driver is supplied to the second display driver through a transparent conductive film which is formed on the glass substrate.

13. A display device comprising:

10 a first display driver set in a first mode, which is one of the display drivers according to claim 4;

a second display driver set in a second mode, which is the display driver according to claim 4, to which the driving voltage generated by the first display driver is supplied as the external voltage supply; and

15 a display panel which is driven based on the voltage generated at least by the second display driver,

wherein the first and second display drivers are mounted on a glass substrate on which the display panel is formed, and

20 wherein the driving voltage generated by the first display driver is supplied to the second display driver through a transparent conductive film which is formed on the glass substrate.

25 14. The display device according to claim 10,

wherein the transparent conductive film has interconnect resistance which is not less than output impedance of the

voltage-follower-type operational amplifier circuit of the first display driver.

15. The display device according to claim 11,

5 wherein the transparent conductive film has interconnect resistance which is not less than output impedance of the voltage-follower-type operational amplifier circuit of the first display driver.

10 16. The display device according to claim 12,

wherein the transparent conductive film has interconnect resistance which is not less than output impedance of the voltage-follower-type operational amplifier circuit of the first display driver.

15

17. The display device according to claim 13,

wherein the transparent conductive film has interconnect resistance which is not less than output impedance of the voltage-follower-type operational amplifier circuit of the first display driver.

20

18. A display device comprising:

a display panel which is formed on a glass substrate, and  
a plurality of display drivers which are mounted on the

25 glass substrate and drive the display panel,

wherein each of the display drivers includes a voltage-follower-type operational amplifier circuit which

generates driving voltage for driving the display panel based on a power source voltage supplied through an interconnecting line formed on the glass substrate.

5 19. The display device according to claim 18,  
wherein the display panel is an active matrix panel.

20. The display device according to claim 18,  
wherein the voltage supplied through the interconnecting  
10 line is gray scale driving voltage.

21. The display device according to claim 19,  
wherein the voltage supplied through the interconnecting  
line is gray scale driving voltage.

15 22. A display driver that is mounted on a glass substrate on  
which a display panel is formed and drives the display panel,  
wherein the display driver is connected to an  
interconnecting line to which a power source voltage which is  
20 supplied to another semiconductor device mounted on the glass  
substrate is applied, and

wherein the display driver includes a voltage-follower-  
type operational amplifier circuit which generates driving  
voltage which drives the display panel based on the power source  
25 voltage.